Exhibit 300: Capital Asset Summary

Part I: Summary Information And Justification (All Capital Assets)

Section A: Overview & Summary Information

Date Investment First Submitted: 2005-08-01
Date of Last Change to Activities: 2012-07-25
Investment Auto Submission Date: 2012-02-27
Date of Last Investment Detail Update: 2012-02-27
Date of Last Exhibit 300A Update: 2012-08-23
Date of Last Revision: 2012-08-23

Agency: 021 - Department of Transportation **Bureau:** 12 - Federal Aviation Administration

Investment Part Code: 01

Investment Category: 00 - Agency Investments

1. Name of this Investment: FAAXX705: Traffic Flow Management (TFM)

2. Unique Investment Identifier (UII): 021-996986499

Section B: Investment Detail

1. **Provide a brief summary of the investment, including a brief description of the related benefit to the mission delivery and management support areas, and the primary beneficiary(ies) of the investment. Include an explanation of any dependencies between this investment and other investments.**

The Traffic Flow Management System (TFMS) provides direct mission support to the FAA by ensuring efficient flow of air traffic through the National Airspace System (NAS). TFMS is the automation backbone for the Air Traffic Control System Command Center (ATCSCC) and the nationwide Traffic Management Units that assist the ATCSCC in strategic planning and management of air traffic. The TFM system is the nation's primary source for capturing and disseminating flight information across the aviation community. The TFMS automation and communication mechanisms support the decision-making process used to adjust flight schedules and/or routes as necessary. When the NAS is impacted by severe weather, congestion, and/or outages, the TFMS has unique capabilities to predict chokepoints and facilitate the collaboration and execution of mitigation initiatives with stakeholders to minimize NAS delays. The TFMS is the access point for essential data exchange with airlines, General Aviation, Homeland Security, DoD, and international service providers. TFMS also serves as a source for travel data to the public. The first useful and pre-Next Generation (NextGen) segment of this investment is composed of Traffic Flow Management- Modernization (TFM-M) and Collaborative Air Traffic Management Technologies (CATMT) Work Package 1 (WP1), which were baselined as a single useful segment by the FAA's Joint Resources Council (JRC) on August 1, 2005. Completed in FY11, TFM-M modernized the operating hardware and software, and CATMT WP1 added new software capabilities. A new segment, TFM

Infrastructure Technical Refresh (FY11-15), was approved by the FAA JRC on March 29, 2011. This new segment provides a replace-in-kind technology refresh of the hardware providing the central data processing capability for TFMS. The program replaces the HW of the TFM Processing Center (TPC) and TFMS legacy application, National Traffic Management Log (NTML), located at the William J Hughes Technology Center (WJHTC); it's back up at the Disaster Recovery Center (DRC); and prime contractor site. Last replaced in 2006, the HW is no longer produced, will become unsupported and unable to support future processing needs. The HW must be replaced to avoid obsolescence, system performance degradation and impact to other programs. This program has dependencies with the following programs and or systems: AIM, FTI, ERAM, ERAM D Position, ATOP, SWIM, TMA-TBFM, DATACOMM, NNEW, and CATMT WP2 and CATMT WP3.

2. **How does this investment close in part or in whole any identified performance gap in support of the mission delivery and management support areas? Include an assessment of the program impact if this investment isn't fully funded.**

The FAA must maintain mission essential operations at its 81 TFM-equipped ATC facilities and 41 external sites for its customers and continue to provide enhanced TFM services. The TFM System provides direct mission support to the FAA by ensuring efficient flow of air traffic through the NAS. Reduction in funding would jeopardize the performance and operational availability of the TFMS, potentially affecting the performance of other FAA systems, overall efficiency in the NAS; as well as reduced NAS delay savings. Additionally, the TFMS Technical Refresh would take longer and cost more thus increase maintenance costs and impact the concurrent development of the NextGen CATMT WP2 and WP3 capabilities. This investment's 1st segment performance gaps are: unused airport capacity; excessive ground delay, avoidable ground delay, excessive airborne delay, excessive restrictions, and lack of predictability. Through the 1st segments modernization of the TFM system and development and deployment of CATMT Work Package 1 capabilities, it is anticipated these gaps will be partially closed through the lifecycle, reducing delays associated with disruptive events. . The TFM Technical Refresh replaces HW of the core elements of the TFM System, a major NAS system and the development platform for NextGen CATMT initiatives. As such, the TFMS Technical Refresh program enables the TFM and CATMT programs to achieve their objectives. Currently the TFM System exceeds the current hardware processing specifications and as a result, experiencing performance degradation. Performance degradation forecasts have not taken into account the planned CATMT WP2 and WP3 functionality, which will utilize the same hardware. Therefore there is added risk that the increased utilization due to the additional functionality will accelerate performance degradation. The TFMS Technical Refresh improves performance by replacing the hardware providing the central data processing capability for the TFM System. Additionally, TFMS hardware, last replaced in 2006-7 is facing obsolescence; the TFMS HW is no longer produced and will no longer be supported in the next 0 -2 years. Though spares can be found to mitigate outages times due to failures, spares will not alleviate the performance degradation. Funds are needed at the requested level to purchase hardware and continue the technology refresh installation activities for the TFM Processing Center at the William J. Hughes Technology Center.

3. **Provide a list of this investment's accomplishments in the prior year (PY), including projects or useful components/project segments completed, new functionality added,**

or operational efficiency achieved.

• TFM completed its first program segment, TFM-M/CATMT WP1, with deployment of the modernized TFM System software in 2010 and deployment in PY11 of the final 2 CATMT WP1 software enhancements, Reroute Impact Assessment (RRIA) and Execution of Flow Strategies (XFS). • RRIA deployed in January 2011 in TFMS Release 4. This enhancement assists TFM specialists better assess airspace demand/capacity imbalances as well as impacts of possible solutions to avoid unnecessary NAS user delay. •XFS deployed in June 2011 in TFMS Release 5 and will be operational after ERAM is deployed nationally. XFS automates the communication of pre-departure reroutes from the TFM system to ERAM for controller execution. • The modernized TFM system with CATMT enhancements provides National Air Space (NAS) user delay savings as well as FAA user workload savings. • A new segment TFMS Technical Refresh (FY11-15) was approved and started in PY11 to avoid hardware obsolescence and support the CATMT enhancements.

4. **Provide a list of planned accomplishments for current year (CY) and budget year (BY).**

CY12 • Continue and complete the initial activities for risk reduction of the TFMS Technical Refresh, which are the engineering analysis and purchase of system hardware spares. The current TFMS hardware are no longer produced. Spares of current critical equipment are needed to help keep current TFM system fully functional until TFMS Technical Refresh is completely accomplished, by minimizing outages due to equipment failure and as a result minimizes impact to concurrent development of the CATMT WP2 and WP3 capabilities on the system. • Continue first phase of the TFMS Technical Refresh activities to replace the hardware of the TFMS legacy application, National Traffic Management Log (NTML). The first phase activities, occurring in CY12, include; completion of the NTML engineering analysis, procurement of NTML replacement hardware, and conduct test and installation of the NTML replacement hardware. The current NTML equipment is no longer produced and no longer supported. The NTML is a TFM application that logs actions the Traffic Managers take to mitigate congestion and demand and shares this information to other FAA Traffic Management facilities for better situation awareness, collaboration and decision support. • Initiate and conduct the engineering analysis for the second phase of the TFMS Technical Refresh, which is the replacement of the TFMS Processing Center (TFMS Core) equipment. This second phase, which occurs over FY12-15, replaces the servers, workstations, servers, routers and associated equipment of the TFMS Core. BY13 • Complete the first phase of the TFMS Technical Refresh activities with the completion of NTML hardware installation with NTML operational on the replacement equipment. • Complete Engineering Analysis for the TFMS Processing Center (TFMS Core) equipment. • Continue the second phase of TFMS Technical Refresh activities of replacing the TFMS Processing Center (TFMS Core) equipment which includes the operational, test and development strings at the FAA William J. Hughes Technical Center (WJHTC), the back- up at the Disaster Recovery Center, and prime contractor locations. Activities in BY13 include procurement of TFMS hardware and initiating test, and installation of equipment.

5. **Provide the date of the Charter establishing the required Integrated Program Team (IPT) for this investment. An IPT must always include, but is not limited to: a qualified fully-dedicated IT program manager, a contract specialist, an information technology specialist, a security specialist and a business process owner before OMB will approve**

this program investment budget. IT Program Manager, Business Process Owner and Contract Specialist must be Government Employees.

2011-04-29

Section C: Summary of Funding (Budget Authority for Capital Assets)

1.

Table I.C.1 Summary of Funding

	PY-1 & Prior	PY 2011	CY 2012	BY 2013
Planning Costs:	$8.0	$0.0	$0.0	$0.0
DME (Excluding Planning) Costs:	$389.6	$13.9	$6.5	$19.4
DME (Including Planning) Govt. FTEs:	$35.0	$5.4	$5.5	$5.6
Sub-Total DME (Including Govt. FTE):	$432.6	$19.3	$12.0	$25.0
O & M Costs:	$137.4	$25.4	$26.2	$26.7
O & M Govt. FTEs:	$2.3	$0.5	$0.4	$0.5
Sub-Total O & M Costs (Including Govt. FTE):	$139.7	$25.9	$26.6	$27.2
Total Cost (Including Govt. FTE):	$572.3	$45.2	$38.6	$52.2
Total Govt. FTE costs:	$37.3	$5.9	$5.9	$6.1
# of FTE rep by costs:	276	39	39	39
Total change from prior year final President's Budget ($)		$7.3	$6.3	
Total change from prior year final President's Budget (%)		19.29%	19.44%	

2. If the funding levels have changed from the FY 2012 President's Budget request for PY or CY, briefly explain those changes:

This version has changed as it reflects the FAA JRC Final Investment Decision for the TFMS Technology Refresh, where the O&M funds for TFM-M/ CATMT WP1 original segment were re-assessed to reflect 5 more years of actual operations costs and resulted in a $70.249M increase for the remaining life cycle period (FY11-22).

Section D: Acquisition/Contract Strategy (All Capital Assets)

Table I.D.1 Contracts and Acquisition Strategy

Contract Type	EVM Required	Contracting Agency ID	Procurement Instrument Identifier (PIID)	Indefinite Delivery Vehicle (IDV) Reference ID	IDV Agency ID	Solicitation ID	Ultimate Contract Value ($M)	Type	PBSA ?	Effective Date	Actual or Expected End Date
Awarded	6920	DTFAWA-04-C-00045									
Awarded	6920	DTFAWA-11-D-0006									

2. If earned value is not required or will not be a contract requirement for any of the contracts or task orders above, explain why:
TFM conducts total program EVM (including prime and support contractors and FTEs) using formal EVM data where mandated by contract and informal data sources (invoices and personnel records) for all other information to assure that the total EVM shows the true program status. The process has been validated by an independent EVM review and TFM received a green rating. All work performed using Level-of-Effort (LOE) arrangements will be defined by Task Orders prior to the performance of any work by a contractor. These various contract types allow the government to provide an incentive to the contractor in critical cost intensive areas to meet project costs while meeting performance and schedule goals. Status reviews are conducted monthly to ensure progress against goals. Part of the overall strategy has always been to separate the individual statements of work into small manageable portions so that if a contractor does not perform, that contractor will be replaced, with minor impact to the TFM effort. The support service contractors are currently Level of Effort contracts/task orders. These are LOE contracts/tasks orders in support of the government activities required to complete the program. These support activities are LOE to allow for the greatest contract flexibility in adjusting contractor support skill types, for the least cost, as the TFMM program has evolved from development to implementation to maintenance. The FAA's EVM Implementation Guide allows for tailoring when required to meet the program needs.

Exhibit 300B: Performance Measurement Report

Section A: General Information

Date of Last Change to Activities: 2012-07-25

Section B: Project Execution Data

Table II.B.1 Projects

Project ID	Project Name	Project Description	Project Start Date	Project Completion Date	Project Lifecycle Cost ($M)
5	TFM-M/ Work Package (WP) 1 program close-out and transition	TFM-M/WP1 program close out, transition and contract activities for TFMs Technology Refresh contract definitization.			
7	TFMS Tech Refresh- Primary Risk Mitigation Effort	Analysis and procurement of spare TFM System critical equipment to keep current system fully functional until TFMS Tech Refresh is complete.			
8	TFMS Tech Refresh Phase 1	Initial phase of system equipment replacement. Replace the hardware of the TFMS legacy application, National Traffic Management Log (NTML).			
9	TFMS Tech Refresh Phase 2 (APB)	Perform Tech Refresh of all remaining TFM Processing Center system hardware. Replaces equipment of the TFM Processing Center (TPC), also referred to as TFMS Core. This includes the TFMS operational, back-up, test and development strings.			

Activity Summary

Roll-up of Information Provided in Lowest Level Child Activities

Project ID	Name	Total Cost of Project Activities ($M)	End Point Schedule Variance (in days)	End Point Schedule Variance (%)	Cost Variance ($M)	Cost Variance (%)	Total Planned Cost ($M)	Count of Activities
5	TFM-M/ Work Package (WP) 1 program close-out and transition							
7	TFMS Tech Refresh- Primary Risk Mitigation Effort							
8	TFMS Tech Refresh Phase 1							
9	TFMS Tech Refresh Phase 2 (APB)							

Key Deliverables

Project Name	Activity Name	Description	Planned Completion Date	Projected Completion Date	Actual Completion Date	Duration (in days)	Schedule Variance (in days)	Schedule Variance (%)
7	20.70.03 TFMS Tech Refresh - Primary Risk Mitigation Effort- Spares Engineering Analysis	Conduct engineering analysis to determine equipment spares requirements to keep current system fully functional until TFM Tech Refresh is accomplished.	2011-11-30	2011-11-30	2011-11-28	145	2	1.38%
7	20.70.04 TFMS Tech Refresh- Risk Mitigation Effort - Procure spare equipment(s)	Procurement of hardware designated as required in above Spares Analysis activity (20.70.03) to keep current system fully functional until TFM Tech Refresh is completely accomplished.	2012-03-31	2012-06-30	2012-06-30	121	-91	-75.21%
8	20.70.05.02 TFMS Tech Refresh Phase 1- Procure NTML hardware	Procure the replacement components identified in the NTML	2012-03-31	2012-03-31	2012-03-31	121	0	0.00%

Key Deliverables

Project Name	Activity Name	Description	Planned Completion Date	Projected Completion Date	Actual Completion Date	Duration (in days)	Schedule Variance (in days)	Schedule Variance (%)
	replacements	Engineering Analysis (20.70.05.01)						
9	20.70.06.01 TFMS Tech Refresh Phase 2- Conduct initial TFMS Core Engineering Analysis	Conduct engineering analysis of TPC (TFMS Core), to include test and development strings, to determine equipment TPC technology refresh needs.	2012-09-30	2012-09-30		184	0	0.00%

Section C: Operational Data

Table II.C.1 Performance Metrics

Metric Description	Unit of Measure	FEA Performance Measurement Category Mapping	Measurement Condition	Baseline	Target for PY	Actual for PY	Target for CY	Reporting Frequency
Availability of the TFMS for conducting normal operations	Percentage	Technology - Reliability and Availability	Over target	0.990000	0.990000	0.999800	0.990000	Monthly
CPU Resource utilization on average during peak demand	Percentage	Technology - Effectiveness	Under target	0.750000	0.750000	0.750000	0.750000	Quarterly
Network Resource Utilization on average during peak demand	Percentage	Technology - Efficiency	Under target	0.750000	0.750000	0.750000	0.750000	Quarterly
Average time in hours to close issue- based Trouble Tickets submitted to CSC's help desk	Number	Customer Results - Service Coverage	Under target	40.000000	40.000000	38.110000	38.000000	Monthly
Use of Reroute Impact Assessment (RRIA) during Severe Weather Avoidance Plan (SWAP) season increase over PY11 levels.	Percentage	Customer Results - Customer Benefit	Over target	1.000000	1.000000	1.000000	1.010000	Semi-Annual